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ON THE SEQUELÆ AND PROPHYLAXIS OF SIMPLE TONSILLAR HYPERTROPHY IN CHILDREN.

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Chronic enlargement of the tonsils is an affection so commonly met with amongst children, that the general practitioner is apt to overlook the importance of disturbed function of these glands, and to pay but little regard to their active treatment. So many are subjects of this disease, in a relatively slight degree, and so widely spread is the idea, that even in a somewhat aggravated form, the affection is one which will last only a few months, or years, and then in many instances disappear spontaneously, that it is considered almost, if not entirely, useless to interfere, or at all events to employ topically any very active medicinal agents. The cost in trouble, pain and anxiety, both to parents and children, in ridding little sufferers of their malady, seems to more than balance any evil consequences which will probably arise from its presence. Thus it is, that healthy and sickly children go on from year to year, bearers of this tumefaction of the fauces, without serious attention being directed towards it. Suddenly, however, some acute trouble of the throat shows itself, either idiopathic in its nature, or allied with one of the exanthemata, and then

anxiety is at once excited, and this frequent condition of additional risk is considered with a greater or less degree of alarm.

Again, a child, who in its infancy has enjoyed good, or even robust, vigorous health, becomes pale, emaciated, loses appetite and strength, and is afflicted with spasmodic disease (laryngismus stridulus, asthma, etc.) of frequently recurrent character, and soon maternal solicitude is awakened, and the origin, or cause of the change earnestly sought for at the hands of the medical adviser.

Too often, we regret to add, the source of physical weakness may be found in the hyperplastic development of the tonsils;—and that this is true, cannot be doubted, when we fairly estimate the pernicious effects upon the general health, which surely follow in the wake of their diseased state.

What are the tonsils?

Histologists tell us they resemble in structure other lymphatic organs of the body. At the same time they inform us that they are characterized by differential features, which approach them to glandular structures. On the one hand, we find in the walls surrounding the central cavity of each one of the masses, which conglomerated form the entire organ, a number of closed follicles, similar to those that form a component part of Peyer's patches in the small intestine; on the other, we have a number of tortuous tubes not unlike in form and structure the ducts of acinous glands, and these tubes open either directly upon the mucous surface of the tonsil, or else into the lacuna of the lobules. Now, from this structure proceed two distinct functions: 1, the formative function, which relates to the constitution of the blood; 2, the glandular, which determines the secretion of a clear, viscid fluid. This fluid, when poured into the buccal cavity, by the contraction of the surrounding muscles in the effort of deglutition, serves to imbibe and lubricate the alimentary bolus.

The tonsils are situated, as you are aware, between the pillars of the fauces on either side, and when of normal size, although easily seen if the mouth be opened and the throat inspected, are not prominent enough to materially diminish the diameters of the isthmus, or interfere with essential vital functions.

How changed this statement becomes whenever the tonsils are diseased! First, and considered as lymphatic organs, their influence upon the transformation of the white blood corpuscles is imperfect, or null. Secondly, the secretion from the glandular structure is altered. It rapidly becomes cloudy and fetid, is apt to flow less easily from the orifices of the follicles, and in many instances these latter become blocked up completely with a white, sebaceous substance of cheesy consistence, which is also soon rendered putrescent. As a consequence the alimentary bolus, though lubrified in its passage through the bucco-pharyngeal opening, carries with it a quantity of morbid secretion, which rapidly sets up dyspeptic trouble, and absorbed into the circulation leads finally to unhealthy nutrition. Owing to the position of the tonsils, we can at once perceive how in cases of chronic enlargement, no matter what may be their intimate or structural characters, several important functions are morbidly affected in a greater or less degree. If the tonsils enlarge towards the median line, the faucial opening is often greatly diminished. At times, and when the hypertrophy is exaggerated in this direction, deglutition is fatiguing and occasionally painful. If the enlargement also takes place in the upward direction, partial obstruction of the posterior nares and compression of the Eustachian orifices are natural sequences, and hence we have difficult respiration and imperfect hearing, and on account of the relative immobility of the soft palate, the voice takes that nasal and muffled intonation so familiar to every medical practitioner.

All the above phenomena may be present as well with adults as children. There are others, however, which relate almost solely to children, viz.: those which attach themselves naturally to arrest of development.

A well-known physiological law is expressed in the following terms: whenever an organ of the body during its period of growth is thrown into disuse, or cut off completely from its normal function by some mechanical obstacle, deformation and arrest of development, followed by atrophy, are natural sequelæ. Let us make the application of this law. Owing to the passage of a less quantity of air through the nasal passages, in the condition under consideration, a diminished volume also enters the larynx and lungs.

What is the result? The nasal passages do not increase in capacity proportionately with the growth of the child, and this lack of growth affects in an equal degree the palatine arch; consequently we find the olfactive and gustatory senses restricted. Again, the lungs do not receive a sufficient supply of oxygen, a certain number of their terminal vesicles are not expanded at all during ordinary inspirations, and those vesicles that are filled are insufficiently so, and the chemical blood changes which take place in the pulmonary structure are but very imperfectly accomplished. Besides, atmospheric pressure in the interior of the lungs, owing to the rarefaction of the air, does not fully counterbalance that from the exterior, and sinking in, with a peculiar deformation of the chest walls, is produced. This visible alteration in the chest is sufficiently notable to be in the estimation of some authors as pathognomonic of tonsillar enlargement, as a somewhat analogous appearance is of rickets. The physical development and proper growth of children thus affected is manifestly seriously impeded. Their nutrition languishes and their muscular energy and activity are markedly diminished.

Further, we may add, by compression of the large vessels of the neck cerebral circulation is at times incompletely performed, the brain becomes dull and apathetic, less inclined to exert itself, and suffers concomitantly with the body, from a condition which is local in origin and may at any time, with rare exceptions, be remedied by a ready and safe operatory procedure.

In the prophylactic treatment of chronic enlargement of the tonsils in children we attach great importance to first, the habit of cold bathing.

We all know how readily children "catch cold," and how frequently this *catching cold*, as it is termed, manifests itself upon the mucous membrane lining the faucial opening. It is to frequently repeated inflammations of the throat more than to any other single cause that is due the disease under consideration.

To guard our little patients efficiently then against the recurrence of colds, let us endeavor by bathing in water of low temperature to activate the functions of the skin, and thus to lessen the likelihood of localized mucous congestion.

Mothers, nurses, and even some of our professional brethren,

are too much disposed to underrate the value, or be fearful of cold ablutions. They recognize how useful a preventive agent against colds they have ever close at hand whenever adults are in question, but they do not believe this to be true of children, or if they acknowledge that cold baths might prove useful, they dread putting their knowledge into practice. They seem to consider that a small child is not sufficiently strong, that its vital forces are not energetic enough to be able to resist such an heroic method of treatment. They tremble for the safety of their nurslings, or children of a more advanced age, and cannot bear to carry out this rational therapeutic system.

And yet is it not manifest in our ever varying climate, where extremes of temperature so closely approximate, that in spite of every precaution being exercised which is dictated by maternal solicitude, children must of necessity be more or less frequently exposed to all the evils that result from draughts, or from cold, or excessive humidity in the atmosphere? Our object then should be to protect them efficiently from the adverse effects of our trying climate. Now, *hot*, or even *tepid bathing*, is, we believe, one of the main causes of recurring congestion or inflammation of the throat. And, we may ask, Can it be otherwise? Take a child of relatively feeble and lymphatic constitution and subject it to bad hygienic influences, viz.: surround it with an insufficient or vitiated supply of air, give it improper food, or cover it with badly adapted clothing, and will you not find that it gradually becomes more markedly strumous and sickly? Warm bathing is to be ranked in the same category. It is enervating, and takes away from bodily vigor.

The skin, it is true, is actively congested during the period of the bath and its capillary circulation greatly augmented, but just so soon as the ambient cold air impinges again upon the cutaneous surface, either directly or through the habitual wearing apparel, the blood supply is driven with increased force (owing to the rapid contraction of the small vessels of the integument) towards the internal viscera and mucous linings, which, in their turn, become congested, and remain so more or less *constantly*, unless by a superabundance of clothing the body is kept in an unnatural state of heat.

If the temperature of the water used in bathing is as low or

lower than that of the surrounding atmospheric medium, what a different physiological action takes place!

A temporary shock follows immersion or the use of the sponge filled with water, after which there is a short period when the surface temperature of the body is lowered, and then a natural warmth or glow takes place, the skin is reddened, its capillary circulation is heightened, and not merely in a temporary manner, but shortly becomes so permanently, and the interior organs are relieved of an overload of blood and greatly activated in their several functions. In the event of the natural warmth, which almost invariably succeeds the use of cold water for bathing purposes (unless it be continued too great a length of time on each occasion), not manifesting itself, we ought to have recourse to *friction*. And rubbing, gently at first and soon with a firmer pressure, the entire trunk and limbs, will greatly stimulate the action of the skin. The rubbing should always proceed from the extremities towards the heart, or in the direction of the venous blood-flow. The use of some fatty, or oleaginous substance of bland, unirritating nature is an excellent adjunct in carrying out the above treatment, and is especially of service where the skin is dry, offers a slightly scaly or furfuraceous aspect, and so gives evidence of imperfect nutrition, or lack of healthy power. Of course, in the above indications of prophylaxis, we would naturally include careful attention to the periodical, but not too frequent use of *pure* soap. The selection of this article has its importance, and we shall therefore particularly recommend Pears' transparent glycerine soap, which is manufactured in London, and is one of the best soaps of which we have cognizance.

Another subject to which we claim attention is care of the feet. They should be kept warm and dry. Cold, moist feet are an habitual and most efficient cause in producing hypertrophy of tonsils. Nowadays our people have finally been awakened to the necessity of warm and appropriate clothing for small children, if they hold to their continuance in good health. Happily, therefore, naked arms, legs, shoulders, and chests are not so frequently encountered as formerly.

Mothers are willing for the sake of permanent good to their offspring to abandon in this regard foolish notions of dress or fashion.

While, however, wise solicitude and care have been directed to clothing, properly speaking, how has it been with respect to the covering of the feet? How many little ones do we see walking the sidewalks of a cold, wintry day with light, paper-like soles to their shoes? And in wet weather, do we always find them better protected? True it is, that over-shoes, arctics, etc., are usually put on over the ordinary walking shoe, but is this the best way of securing warmth and dryness? Decidedly not. Excepting those times when there is much slush or snow upon the ground, we consider the cork-sole shoe far superior to the gutta-percha, or other style of impermeable over-shoe, because, 1st, it keeps the feet quite as dry, 2d, warmth is secured without that constant moisture of the feet almost inevitable with over-shoes on account of arrest of insensible evaporation.

Another way of preventing the soles of shoes or boots from absorbing water is to cover them with a coating of oil (castor-oil is the best), which will render them impermeable and may be used without risk of injurious effects to the wearer.

Thick-sole shoes will of course lessen the facility with which the feet become cold or wet. Allowing, however, that the feet are prevented from getting really wet, it must still be admitted that the soles of shoes are frequently made, cold and humid. Now this circumstance alone will promote rapid and direct absorption of heat from the feet, and the effect will be considerably increased by the evaporation due to atmospheric action, which is constantly continued.

Colds may also be rendered somewhat less frequent in young children, and attacks of acute tonsillitis may, we are told, be occasionally aborted by putting a plug of cotton wool in either ear whenever they go into the open air during a period of excessive cold or high winds. This habit is recommended in a late number of the *London Practitioner* (and the physiological explanation given), and lauded far above the custom of surrounding the neck with mufflers of any description.

One other point is worthy of consideration, viz.: Cold is taken just as easily by the rapid passage from a very cold, or damp atmosphere, to one where the temperature is excessively dry or elevated, as by the sudden change from the latter conditions to those first mentioned. We should be careful therefore to counsel nurses—

1st. Not to keep the nursery at a too high temperature, and always to have a basin, pitcher, or bucket full of fresh, pure water, with the surface exposed to the air contained in the room.

2d. Not to allow children to approach a fire-place or register immediately upon entering or leaving the house.

3d. Not to keep extra wraps on their little charges, when at home, a moment longer than is absolutely essential.

Practical attention to the preceding rules, and also to what we have written with respect to cold bathing, care of the feet, etc., as prophylactic measures of hypertonsillar growth, will be found, we are firmly convinced, of unquestionable utility.